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Table 1 – Characteristics of the gestation groups.

	37-38 weeks gestation	39-43 weeks gestation	P value
Total live born (Caucasian, singleton births only)	1835	8861	
Survivors at 1 year (Caucasian, singleton survivors only)	1799	8742	
Had spirometry at 8-9 years	911 (50.6)	4554 (52.1)	
Had spirometry at 14-17 years	602 (33.5)	3064 (35.0)	
Total number in group who had any spirometry	993	5042	
Male (%)	527 (53.1)	2452 (48.6)	0.011
Maternal smoking (%)	168/984 (17.1)	887/4984 (17.8)	0.587
Manual workers (%)	357/975 (36.6)	1832/4832 (37.9)	0.445
Exclusively breast fed for at least 3 months (%)	539/941 (57.3)	2717/4712 (57.7)	0.908
Had Caesarean section	181/967 (18.7)	358/4855 (7.4)	0.000
Mean birth-weight (g, SD)	3204.1 (456.0)	3556.0 (440.2)	0.000
Mean birth-weight (z-score by LMS, SD)	0.45 (1.04)	0.08 (0.92)	0.000
Mean gestation (weeks, SD)	37.7 (0.45)	40.2 (0.94)	0.000
At spirometry at 8-9 years of age:			
Mean age (months, SD)	103.5 (3.2)	103.4 (3.1)	0.283
Mean height (cm, SD)	132.5 (6.0)	132.4 (5.7)	0.854
Mean height (z-score, SD)	0.03 (1.05)	0.02 (0.99)	0.697
Mean weight (Kg, SD)	30.4 (6.1)	30.2 (5.7)	0.334
Mean weight (z-score, SD)	0.04 (1.04)	0.01 (0.97)	0.304
At spirometry at 14-17 years of age:			
Mean age (months, SD)	185.7 (3.5)	185.7 (3.4)	0.843
Mean height (cm, SD)	169.6 (8.5)	169.2 (8.3)	0.283
Mean height (z-score, SD)	0.01 (0.99)	0.02 (1.00)	0.900
Mean weight (Kg, SD)	62.5 (12.5)	61.4 (11.8)	0.036
Mean weight (z-scores, SD)	0.08 (1.03)	0.01 (0.98)	0.156

Table 2 – Mean and 95% CI of z-score of lung function measures adjusted for age, gender and height, and ratios of raw lung function values at age 8-9 and then 14-17, with confidence intervals for the difference of means (early term – term), unadjusted and adjusted for maternal smoking in pregnancy and social status and then adjusted for maternal smoking in pregnancy, social status and delivery by Caesarean section (CS).

8-9 years	37-38 weeks N=911		39-43 weeks n=4554		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted for maternal smoking and social status)	p-value for adjusted analysis	Difference and 95% CI (adjusted for maternal smoking and social status and delivery by CS)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI					
FEV₁	-0.072	(-0.14,-0.01)	0.054	(0.02,0.08)	-0.125 (-0.197,-0.054)	-0.135 (-0.207, -0.062)	0.000	-0.136 (-0.211, -0.062)	0.000
FVC	-0.053	(-0.12,0.01)	0.041	(0.01,0.07)	-0.95 (-0.165, -0.024)	-0.103 (-0.175, -0.032)	0.005	-0.101 (-0.175, -0.028)	0.007
FEF₂₅₋₇₅	-0.051	(-0.12,0.14)	0.039	(0.01,0.07)	-0.090 (-0.161, -0.18)	-0.097 (-0.169, -0.024)	0.009	-0.098 (-0.172, -0.024)	0.009
FEV₁/FVC	0.881	(0.88, 0.89)	0.885	(0.88,0.89)	-0.004 (-0.009, 0.001)	-0.004 (-0.009, 0.001)	0.124	-0.004 (-0.009, 0.001)	0.159
FEF₂₅₋₇₅/FVC	1.201	(1.19,1.22)	1.216	(1.21,1.22)	-0.015 (-0.033, 0.004)	-0.015 (-0.032, 0.002)	0.078	-0.014 (-0.034, 0.004)	0.112

14-17 years	37-38 weeks N=602		39-43 weeks n=3064		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted for maternal smoking and social status)	p-value for adjusted analysis	Difference and 95% CI (adjusted for maternal smoking and social status and delivery by CS)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI					
FEV₁	-0.027	(-0.11,0.05)	0.025	(-0.01,0.06)	-0.052 (-0.141, 0.37)	-0.053 (-0.143, 0.038)	0.252	-0.045 (-0.138, 0.048)	0.340
FVC	-0.001	(-0.82,0.71)	0.009	(-0.27,0.05)	-0.010 (-0.098, 0.078)	-0.016 (-0.105, 0.74)	0.731	-0.006 (-0.098, 0.086)	0.899
FEF₂₅₋₇₅	-0.031	(-0.11,0.49)	0.031	(-0.01,0.07)	-0.061 (-0.149, 0.26)	-0.063 (-0.152, 0.25)	0.162	-0.063 (-0.154, 0.028)	0.177
FEV₁/FVC	0.898	(0.89, 0.90)	0.903	(0.90, 0.91)	-0.006 (-0.013, 0.001)	-0.005 (-0.012, 0.002)	0.114	-0.005 (-0.012, 0.002)	0.176
FEF₂₅₋₇₅/FVC	1.075	(1.05, 1.10)	1.090	(1.08,1.10)	-0.016 (-0.039, 0.008)	-0.015 (-0.037, 0.009)	0.200	-0.014 (-0.037, 0.011)	0.278

There is some missing data, numbers shown are the maximum at each time point for the standardised lung function scores.

Percentage male in early term-born group at 8-9 years 53.5% and at 14-17 years 50.8%. Percentage male in full term-born group at 8-9 years 49.3% and at 14-17 years 46.3%.

Table 3 – Mean and 95% CI of z-score of lung function measures adjusted for age, gender and height, and ratios of raw lung function values at age 8-9 and then 14-17, with confidence intervals for the difference of means (CS – no CS), unadjusted and adjusted for maternal smoking in pregnancy and social status.

	Had CS N=498		No CS n=4787		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI			
FEV₁	-0.043	(-0.13,0.05)	0.040	(0.01,0.07)	-0.083 (-0.176, 0.010)	-0.075 (-0.171, 0.020)	0.122
FVC	-0.079	(-0.17, 0.01)	0.039	(0.01,0.07)	-0.118 (-0.209, -0.026)	-0.129 (-0.222, -0.035)	0.007
FEF₂₅₋₇₅	0.016	(-0.07, 0.10)	0.022	(-0.01,0.05)	-0.006 (-0.098, 0.087)	0.013 (-0.082, 0.107)	0.790
FEV₁/FVC	0.887	(0.88,0.89)	0.884	(0.88,0.89)	0.003 (-0.003, 0.009)	0.005 (-0.002, 0.011)	0.136
FEF₂₅₋₇₅/FVC	1.220	(1.20, 1.24)	1.213	(1.21, 1.22)	0.008 (-0.014, 0.030)	0.012 (-0.010, 0.034)	0.277

	Had CS N=335		No CS n=3213		Difference and 95% CI (unadjusted)	Difference and 95% CI (adjusted)	p-value for adjusted analysis
	Mean	95% CI	Mean	95% CI			
FEV₁	0.021	(-0.09,0.13)	0.015	(-0.02,0.05)	0.006 (-0.109, 0.121)	0.006 (-0.111, 0.123)	0.923
FVC	0.014	(-0.10, 0.12)	0.006	(-0.03,0.04)	0.008 (-0.106, 0.122)	-0.004 (-0.120, 0.112)	0.946
FEF₂₅₋₇₅	0.074	(-0.03,0.18)	0.012	(-0.02,0.05)	0.062 (-0.050, 0.175)	0.074 (-0.041, 0.189)	0.206
FEV₁/FVC	0.902	(0.89, 0.91)	0.903	(0.90,0.90)	-0.001 (-0.010, 0.008)	0.001 (-0.008, 0.011)	0.760
FEF₂₅₋₇₅/FVC	1.101	(1.07,1.13)	1.089	(1.08,1.10)	0.015 (-0.015, 0.044)	0.019 (-0.013, 0.051)	0.233

There is some missing data, numbers shown are the maximum at each time point for the standardised lung function scores.

Percentage male in the had CS group at 8-9 years 49.4% and at 14-17 years 49.3%. Percentage male in the no CS group at 8-9 years 49.8% and at 14-17 years 46.6%.

Table 4 – B value and SEM for early tem birth and later lung function (model 1) and early term birth, delivery by caesarean section and the interaction between early term birth and caesarean section (model 2) at age 8-9 and then 14-17, with p-values

	B (SEM) for early term in model 1	p-value	B (SEM) for early term in model 2	p-value	B (SEM) for caesarean section in model 2	p-value	B (SEM) for interaction between early term and caesarean section in model 2	p-value
FEV₁	-0.081 (0.0494)	0.100	-0.097 (0.0542)	0.073	-0.116 (0.750)	0.122	0.151 (0.1376)	0.271
FVC	-0.012 (0.0486)	0.801	-0.016 (0.0534)	0.766	-0.115 (0.0739)	0.118	0.086 (0.1355)	0.525
FEF₂₅₋₇₅	-0.101 (0.0485)	0.037	-0.115 (0.0532)	0.031	-0.050 (0.0736)	0.499	0.100 (0.1351)	0.459

	B (SEM) for early term in model 1	p-value	B (SEM) for early term in model 2	p-value	B (SEM) for caesarean section in model 2	p-value	B (SEM) for interaction between early term and caesarean section in model 2	p-value
FEV₁	-0.043 (0.0499)	0.394	-0.091 (0.0547)	0.097	-0.025 (0.0757)	0.740	0.272 (0.1389)	0.050
FVC	-0.003 (0.0498)	0.957	-0.041 (0.0547)	0.452	-0.037 (0.0756)	0.621	0.227 (0.1388)	0.102
FEF₂₅₋₇₅	-0.072 (0.0489)	0.141	-0.105 (0.0536)	0.051	0.065 (0.0742)	0.381	0.138 (0.1362)	0.311

Number of children used in both models is 2920

Percentage male in early term-born group 51.3%.

Table 5 – Rates of current asthma at 7.6 years of age based on doctor-diagnosed asthma ever with symptom +/-or treatment in previous 12 months and current asthma at 13.8 years of age based on doctor diagnosed asthma ever asthma and child based respiratory questionnaire data at 103m (8.58 years) completed by mother.

	37-38 weeks	39-43 weeks	Pearson chi-square t
Current asthma at 7.6 years of age, based on reported doctor-diagnosed asthma ever with symptoms +/-or treatment in previous 12 months (%)	155/1035 (15.0%)	704/5184 (13.6%)	0.235
Current asthma at 13.8 years of age, based on doctor-diagnosed asthma ever (%)	232/977 (23.7%)	1072/4802 (22.3%)	0.332
Child had wheezing in past year and did not see doctor (%)	74/1141 (6.5%)	334/5550 (6.0%)	0.548
Child had asthma in past year and saw doctor (%)	51/1137 (4.5%)	340/5539 (6.1%)	0.031 (significant)
Child had asthma in past year and did not see doctor (%)	65/1137 (5.7%)	297/5539 (5.4%)	0.630
Child given asthma medication in past year yes 1-2 times (%)	38/1121 (3.4%)	172/5460 (3.2%)	0.678
Child given asthma medication in past year yes 3+ times (%)	107/1121 (9.5%)	533/5460 (9.8%)	0.823

Percentage male in early term-born group for current asthma at 7.6 years 55.0% and for current asthma at 13.8 years 54.9% and for questionnaire data at 8.58 years 53.7 %.
Percentage male in full term-born group for current asthma at 7.6 years 50.1% and for current asthma at 13.8 years 49.3% and for questionnaire data at 8.58 years 49.7%.

Table 6 – Child based respiratory questionnaire data at 16 + years (198m)

	37-38 weeks	39-43 weeks	Pearson chi-square
Child has had wheezing or whistling in the chest at any time in the past completed by mother (%)	182/804 (22.6%)	856/3865 (22.1%)	0.761
Only answered if yes to above question was the following question asked: Child has had wheezing or whistling in their chest in the past 12 months completed by mother (%)	87/287 (30.3%)	395/1420 (27.8%)	0.391
Study child has had asthma completed by mother (%)	196/796 (24.6%)	952/3831 (24.8%)	0.893
Child has had wheezing with whistling on chest in past 12 months completed by child (%)	88/714 (12.3%)	410/3425 (12.0%)	0.791
Child has had wheezing in past 12 months and saw doctor completed by child (%)	31/712 (4.4%)	168/3401 (4.9%)	0.508
Child has had wheezing in past 12 months and did not see doctor completed by child (%)	92/712 (12.9%)	415/3401 (12.2%)	0.596
Told by doctor has asthma completed by child (%)	190/717 (26.5%)	863/3409 (25.3%)	0.509
Child had asthma in past year and saw a doctor completed by child (%)	42/709 (5.9%)	187/3404 (5.5%)	0.649
Child had asthma in past year and did not see doctor completed by child (%)	44/709 (6.2%)	230/3404 (6.8%)	0.593
In the past 12 months been prescribed any asthma medication completed by child (%)	83/713 (11.6%)	389/3424 (11.4%)	0.831

Percentage male in early term-born group for children who had complete questionnaire data 48.6%. Percentage male in full term-born group for children who had complete questionnaire data 43.3%.

